

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,841,134 B2  
DATED : January 11, 2005  
INVENTOR(S) : Hanus et al.

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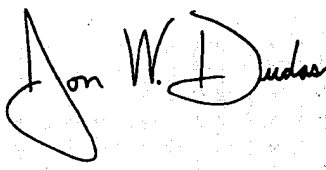
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete Title page illustrating figure, and substitute therefor, new Title page illustrating figure (attached).

Delete drawing sheets 1-9, and substitute therefor, drawing sheets 1-9, with the attached sheets.

Signed and Sealed this

Twentieth Day of December, 2005

A handwritten signature in black ink, reading "Jon W. Dudas", is written over a faint, rectangular grid background.

JON W. DUDAS

*Director of the United States Patent and Trademark Office*

(12) **United States Patent**  
**Hanus et al.**

(10) Patent No.: **US 6,841,134 B2**  
 (45) Date of Patent: **Jan. 11, 2005**

(54) **ELECTRICALLY-HEATED CHEMICAL  
 PROCESS REACTOR**

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 (US)**

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 (US)**

(\*) Notice: Subject to any disclaimer, the term of this  
 patent is extended or adjusted under 35  
 U.S.C. 154(b) by 813 days.

(21) Appl. No.: **09/760,081**

(22) Filed: **Jan. 12, 2001**

(65) **Prior Publication Data**

US 2002/0094312 A1 Jul. 18, 2002

(51) Int. Cl.<sup>7</sup> ..... **F01N 3/02**

(52) U.S. Cl. .... **422/174; 422/199; 422/187**

(58) Field of Search ..... **422/198, 199,  
 422/187, 173, 174**

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*Primary Examiner*—Kiley S. Stoner

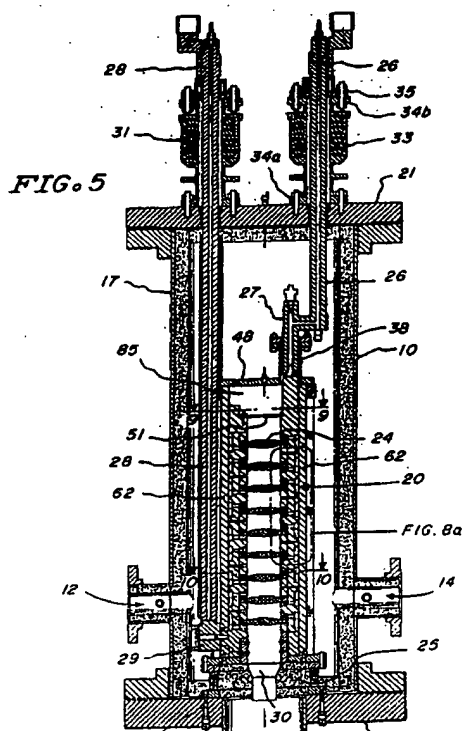
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 Thomas J. Nikolai

(57) **ABSTRACT**

An electrically-heated chemical process reactor having an  
 inlet for receiving industrial gases, an internal channel for  
 passing the flow of gases, and an outlet for expelling the  
 gases. An array of current-carrying screen element packets  
 are arranged along the channel for receiving a heating  
 current, and the internal gas channel includes passages  
 through the array for preheating the gas prior to entering the  
 channel.

**19 Claims, 9 Drawing Sheets**



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FIG. 3

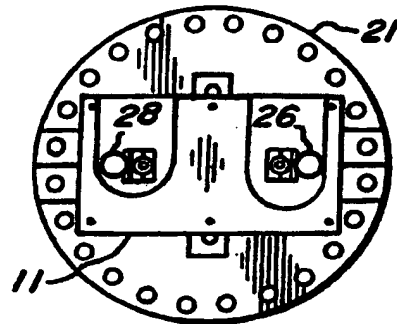


FIG. 1

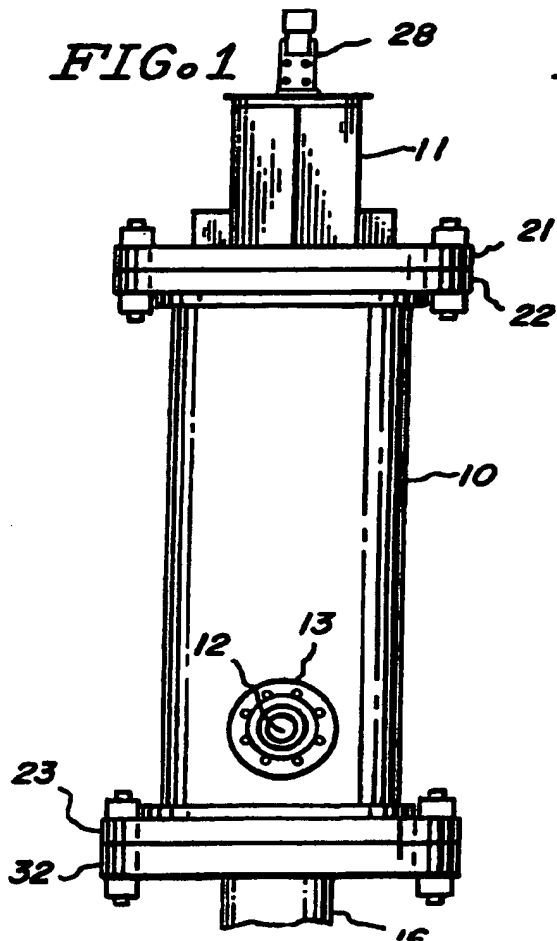
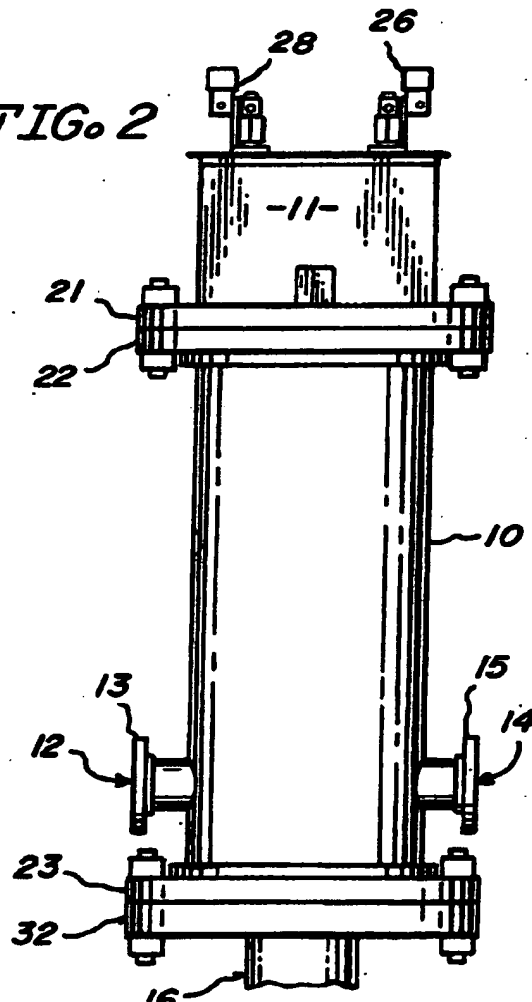


FIG. 2



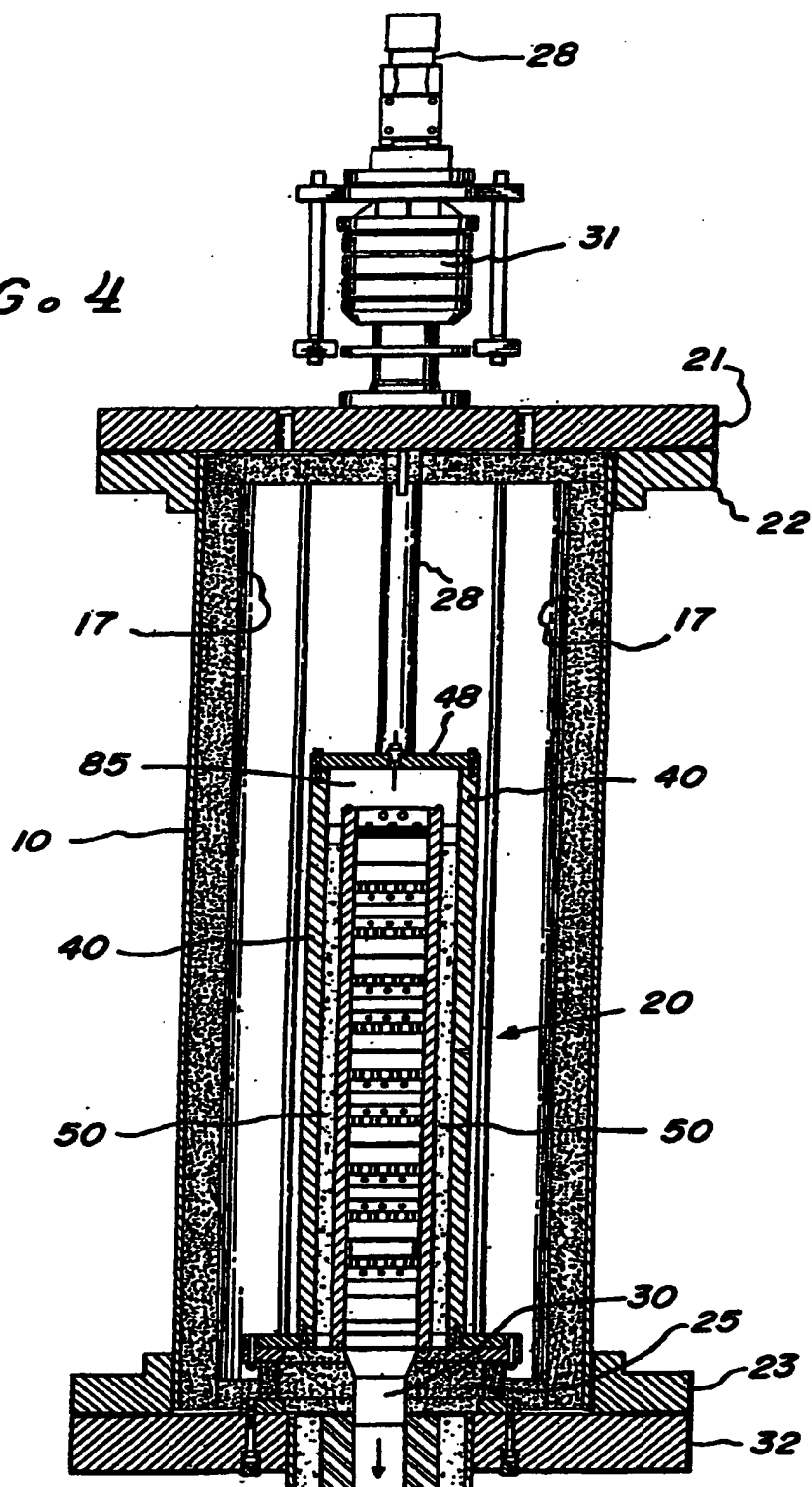
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FIG. 4



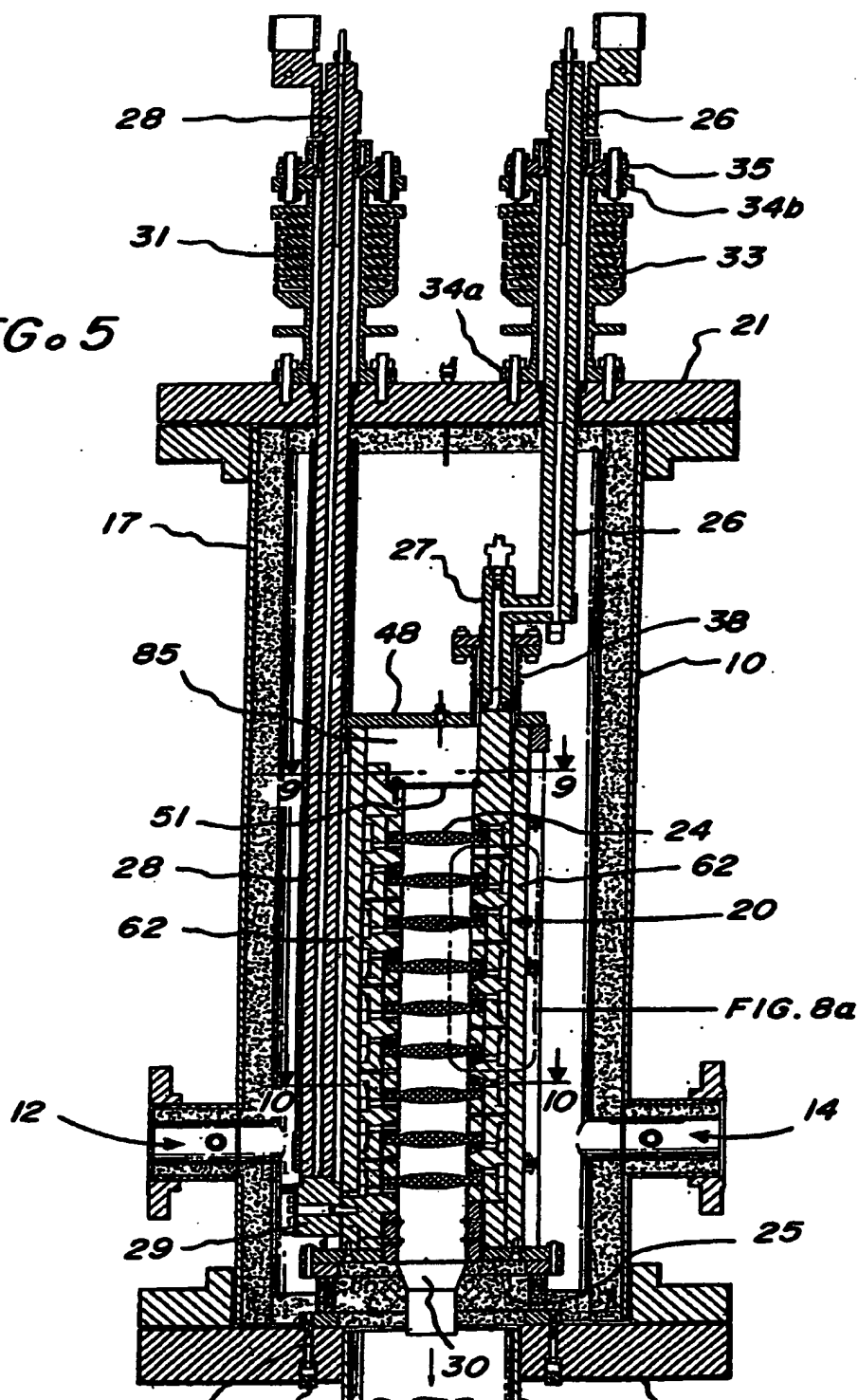
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FIG. 5

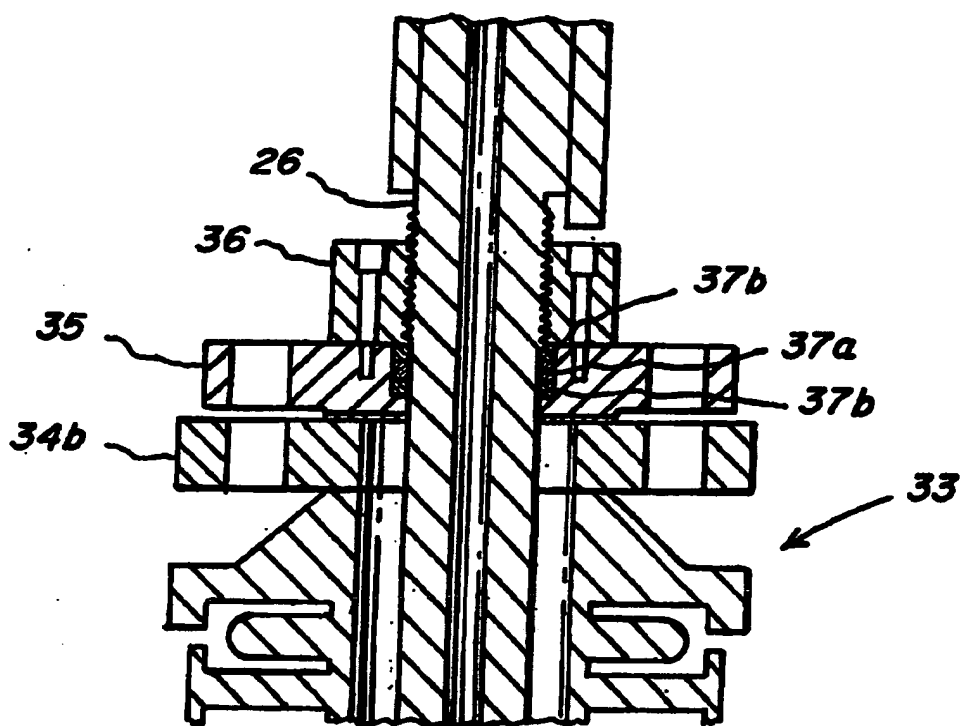


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**FIG. 6A**



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FIG. 7A

FIG. 7B

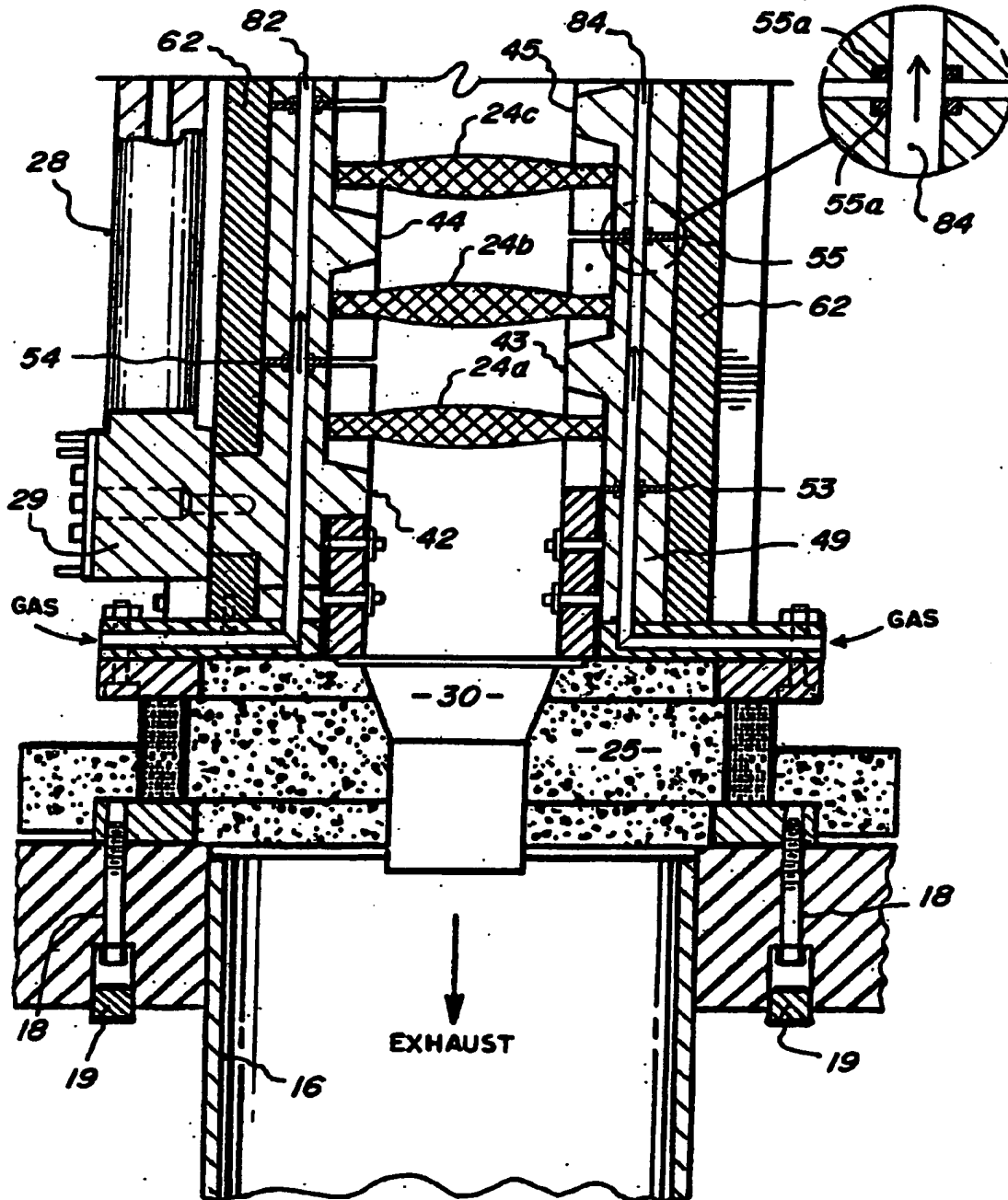
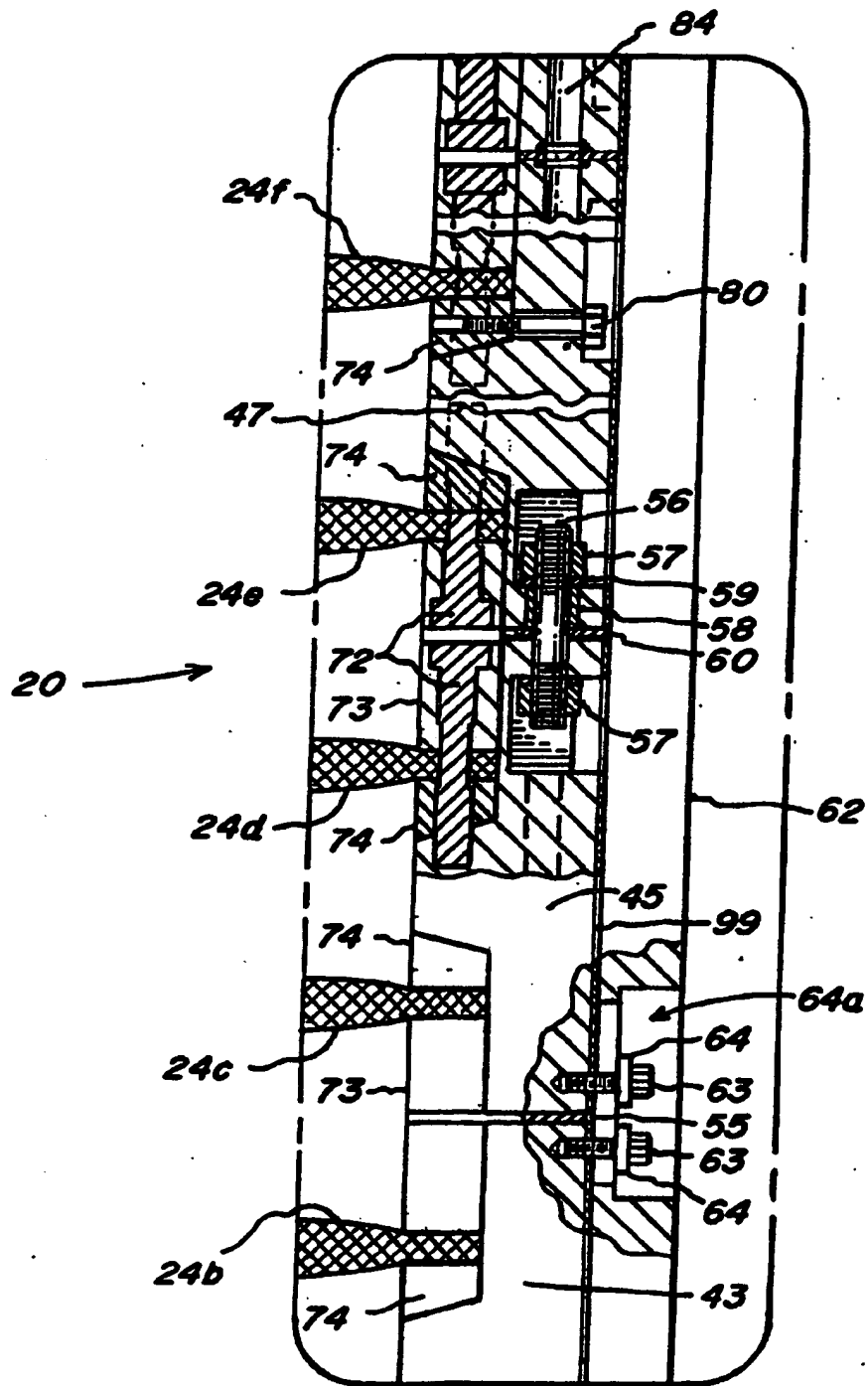




FIG. 8A

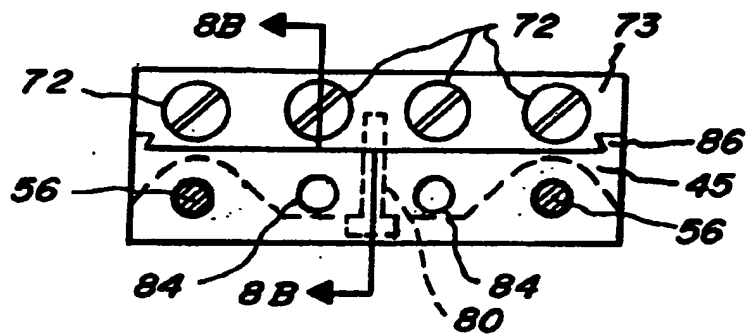
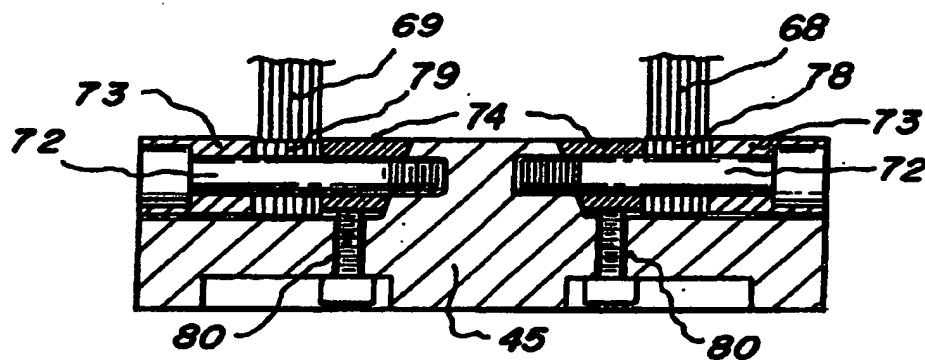
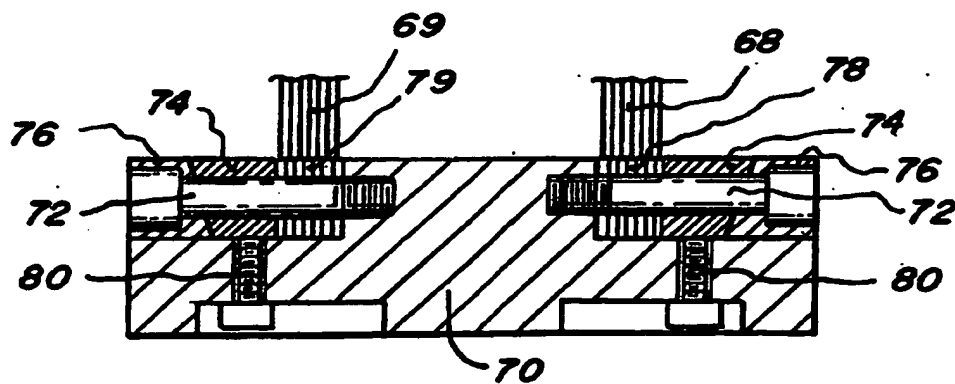


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**FIG. 8C****FIG. 8B****FIG. 8D**  
(ALTERNATE)

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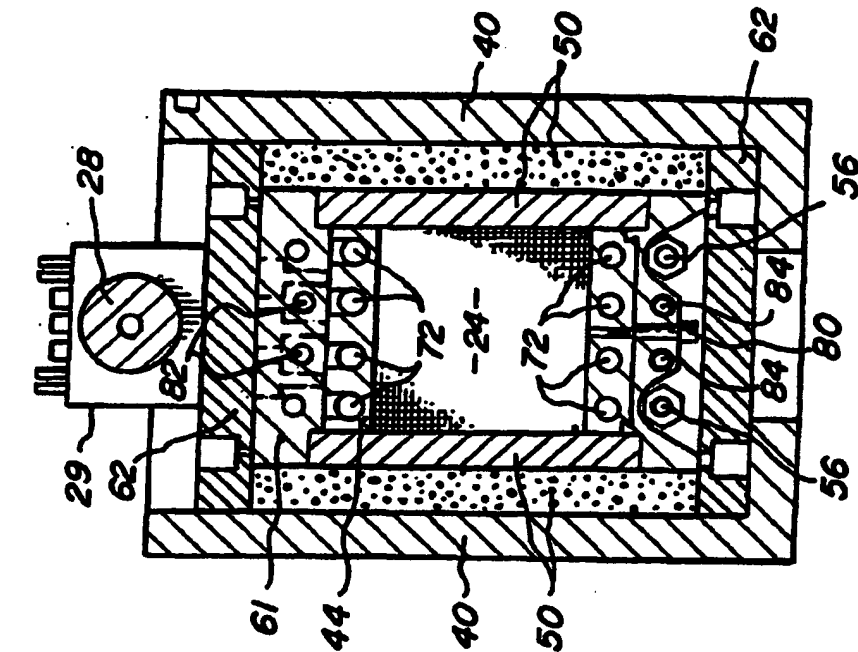


FIG. 9

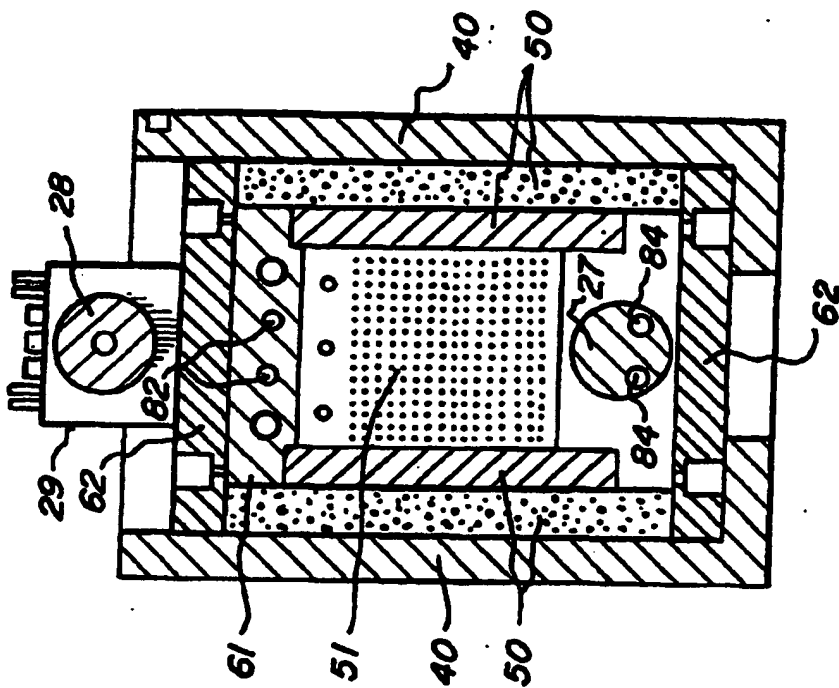


FIG. 10